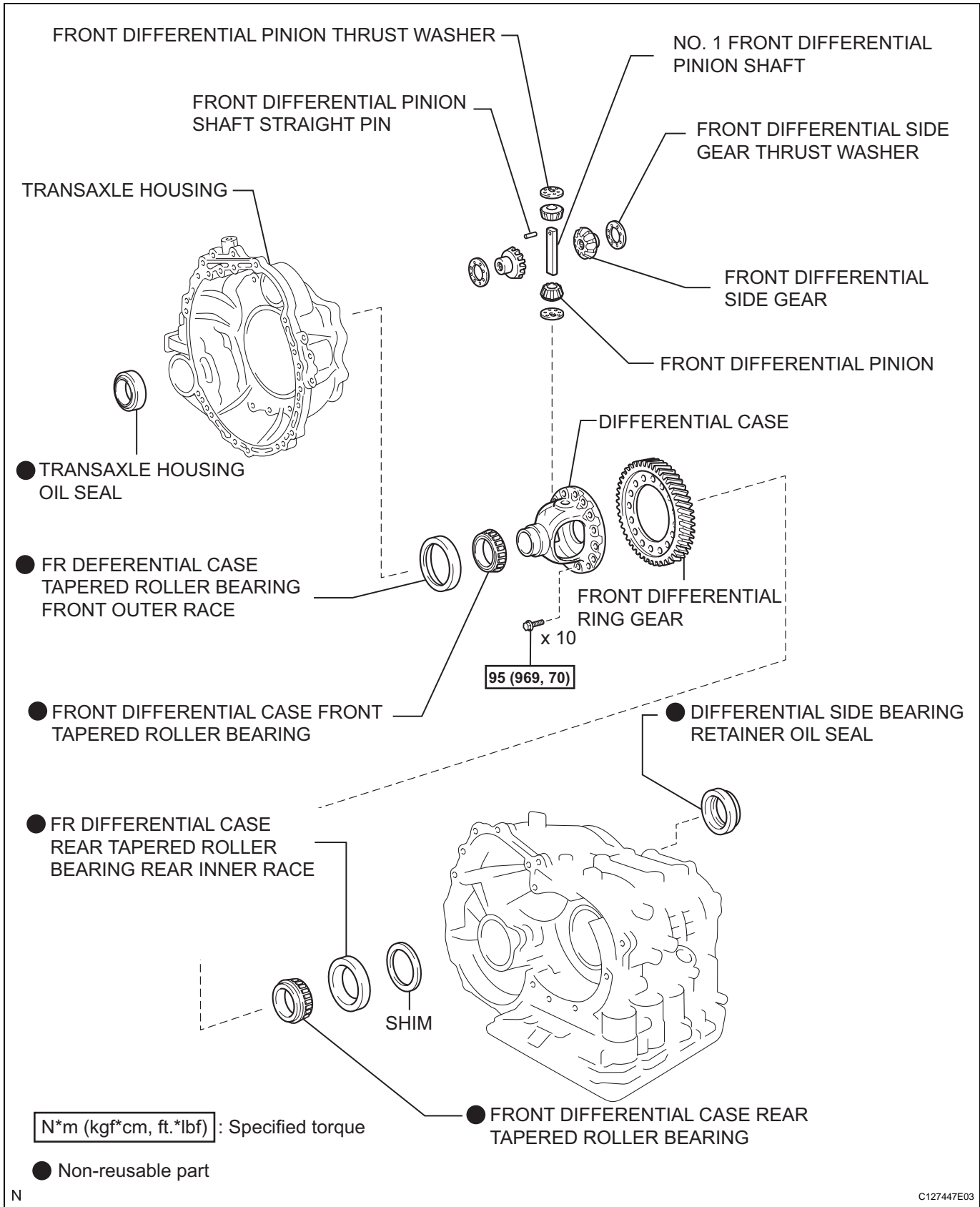


# DIFFERENTIAL CASE

## COMPONENTS

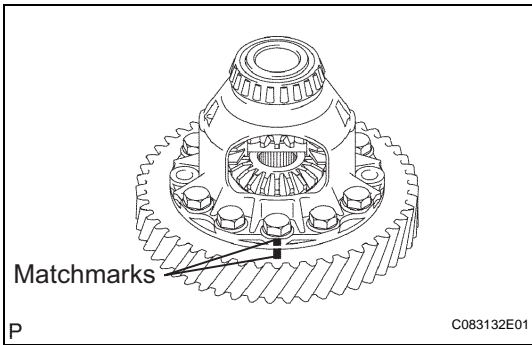
AX



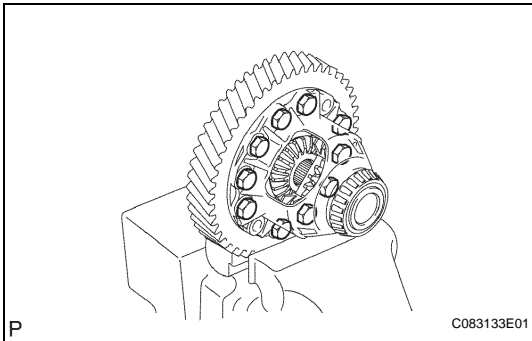
## DISASSEMBLY

### 1. REMOVE FRONT DIFFERENTIAL RING GEAR

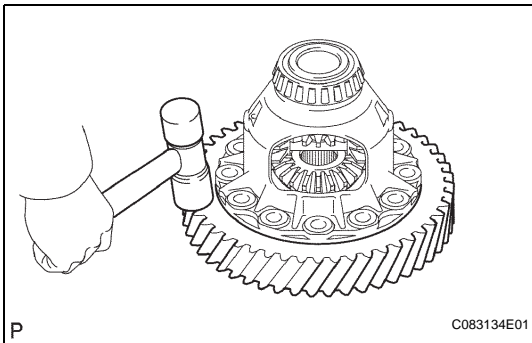
- (a) Place the matchmarks on the ring gear and differential case.



- (b) Remove the 10 bolts.



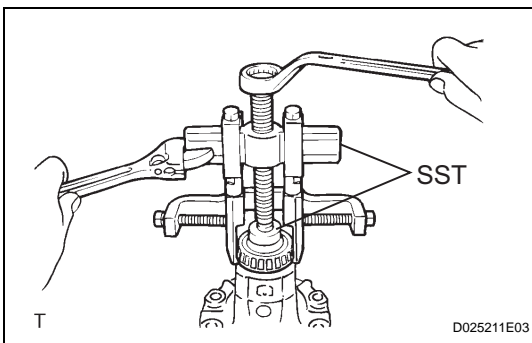
- (c) Using a plastic-faced hammer, tap on the ring gear to remove it from the case.



### 2. REMOVE FRONT DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

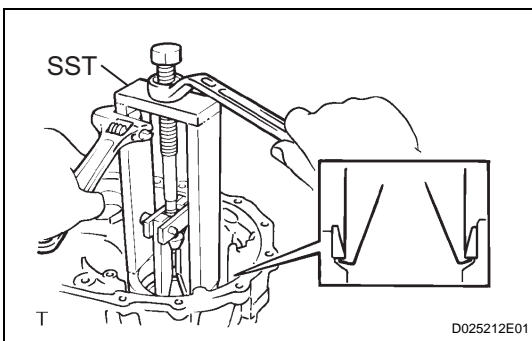
- (a) Using SST, remove the front differential case tapered roller bearing front inner race from the differential case.

**SST 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04061, 09957-04010, 09958-04011), 09950-60010 (09951-00340)**

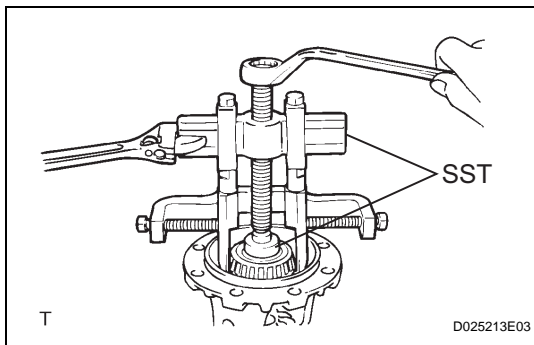


- (b) Using SST, remove the front differential case tapered roller bearing front outer race and differential case washer.

**SST 09387-00041 (09387-01030, 09387-01040, 09387-02010, 09387-02020)**



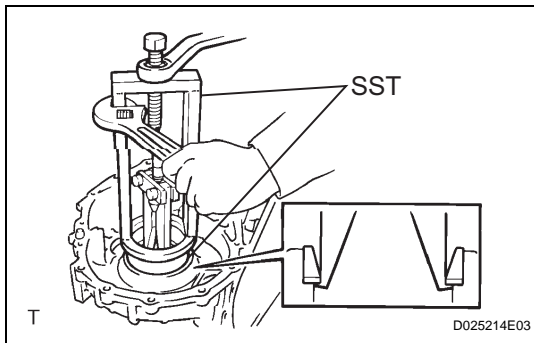
AX



### 3. REMOVE FRONT DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

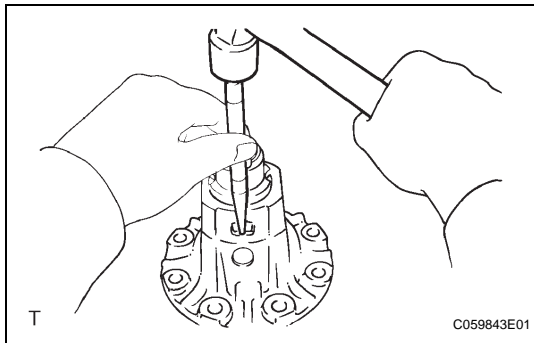
- (a) Using SST, remove the front differential case tapered roller bearing rear inner race from the differential case.

**SST** 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04061, 09957-04010, 09958-04011), 09950-60010 (09951-00340)



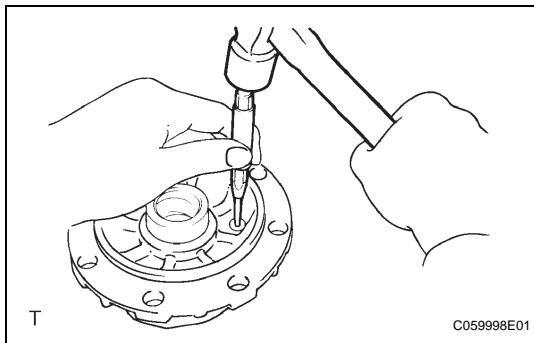
- (b) Using SST, remove the front differential case tapered roller bearing rear outer race from the differential case washer.

**SST** 09387-00041 (09387-01030, 09387-01040, 09387-02010, 09387-02020)

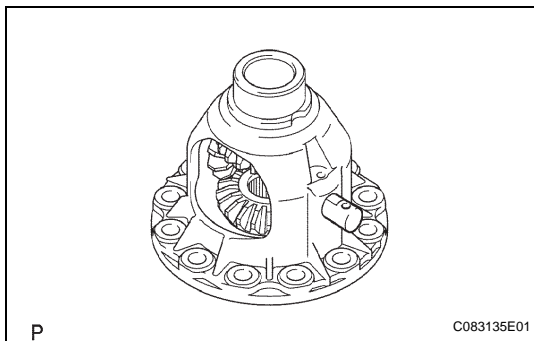


### 4. REMOVE FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

- (a) Using a punch and hammer, loosen the staked part of the differential case.

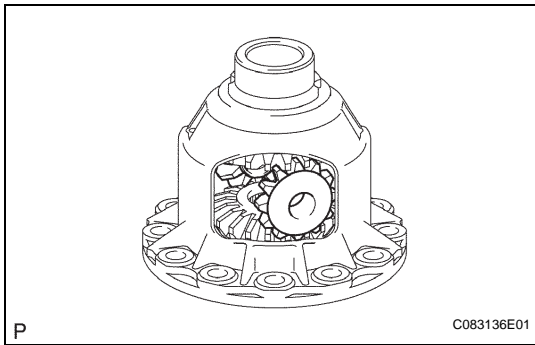


- (b) Using a pin punch (5 mm), tap out the pin from the ring gear side.



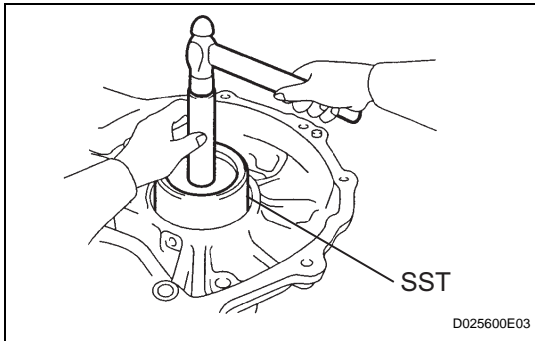
### 5. REMOVE NO. 1 FRONT DIFFERENTIAL PINION SHAFT

- (a) Remove the front differential pinion shaft from the differential case.



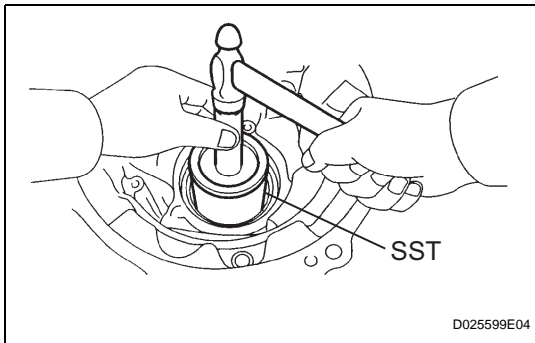
## 6. REMOVE FRONT DIFFERENTIAL SIDE GEAR

- Remove the 2 front differential pinions, 2 pinion thrust washers, 2 front differential side gears and 2 side gear thrust washers from the differential case.



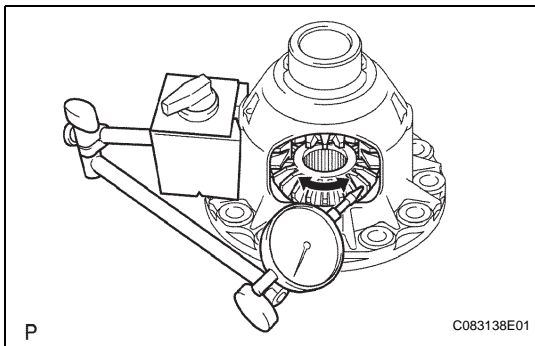
## 7. REMOVE DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

- Place the transaxle case in a vise.
- Using SST, remove the oil seal.  
**SST 09308-00010**



## 8. REMOVE TRANSAXLE HOUSING OIL SEAL

- Place the transaxle housing in a vise.
- Using SST, remove the oil seal.  
**SST 09308-00010**



## INSPECTION

### 1. INSPECT FRONT DIFFERENTIAL SIDE GEAR BACKLASH

- Using a dial indicator, measure the backlash of the side gear.

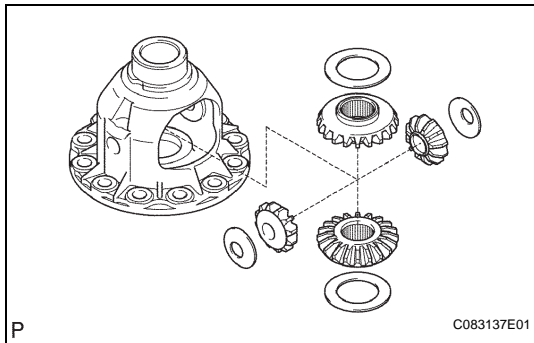
**Standard backlash:**

**0.05 to 0.20 mm (0.0020 to 0.0070 in.)**

**Standard thrust washer thickness**

Thickness	Thickness
1.0 mm (0.0394 in.)	1.2 mm (0.0472 in.)
1.1 mm (0.0433 in.)	1.3 mm (0.0512 in.)

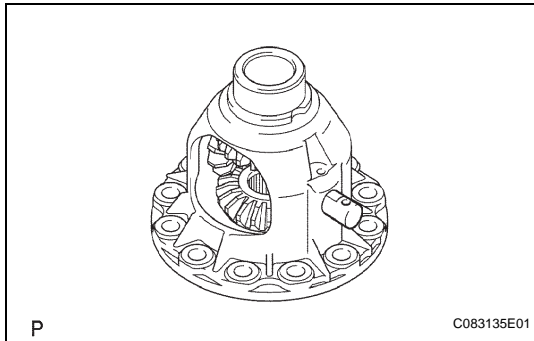
AX



## REASSEMBLY

### 1. INSTALL FRONT DIFFERENTIAL SIDE GEAR

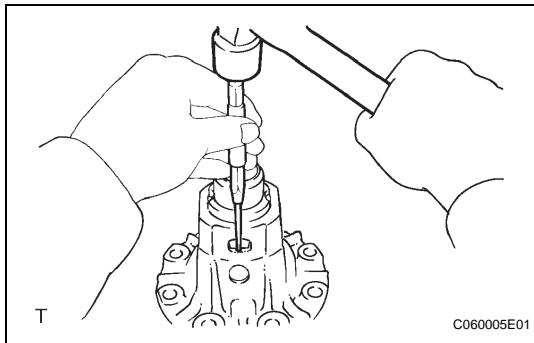
- (a) Coat the 2 front differential side gears, 2 side gear thrust washers, 2 front differential pinions and 2 pinion thrust washers with ATF, and install them to the differential case.



### 2. INSTALL NO. 1 FRONT DIFFERENTIAL PINION SHAFT

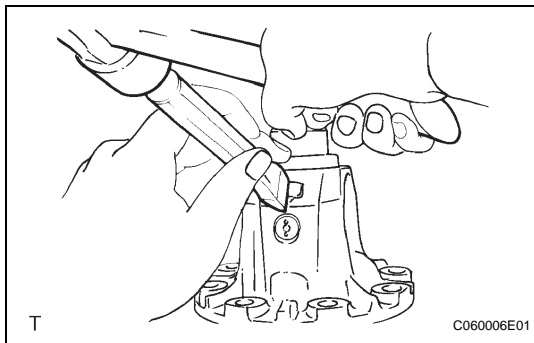
- (a) Coat the front differential pinion shaft with ATF, and install it to the differential case.

### 3. INSPECT FRONT DIFFERENTIAL SIDE GEAR BACKLASH (See page [AX-257](#))

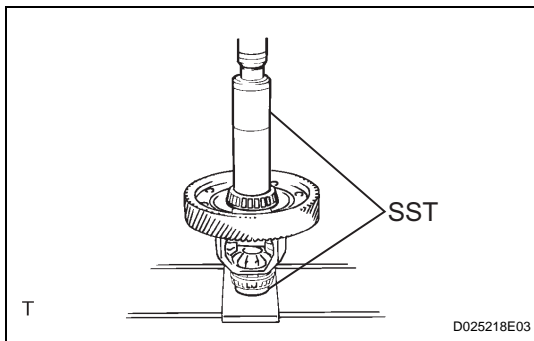


### 4. INSTALL FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

- (a) Using a pin punch and hammer, tap in the pinion shaft straight pin.



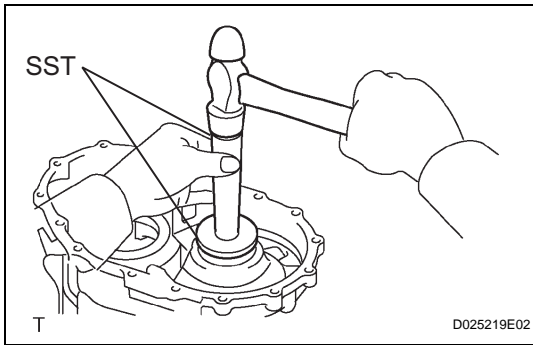
- (b) Using a chisel and hammer, stake the differential case.



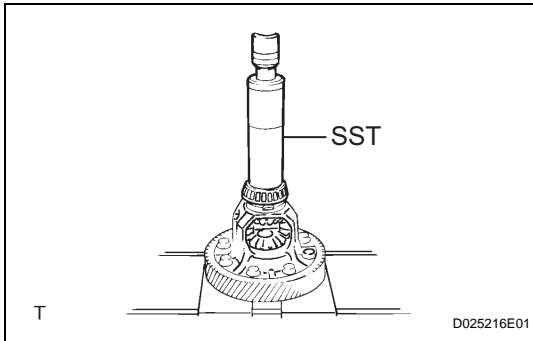
### 5. INSTALL FRONT DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

- (a) Using SST and a press, press in the front differential case tapered roller bearing rear inner race to the differential case.

**SST 09608-06041**

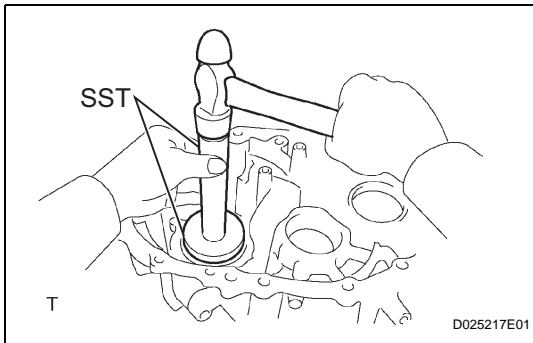


- (b) Using SST and a hammer, tap in the case washer and front differential case tapered roller bearing rear outer race to the transaxle case.  
**SST 09950-60020 (09951-00710), 09950-70010 (09951-07100)**

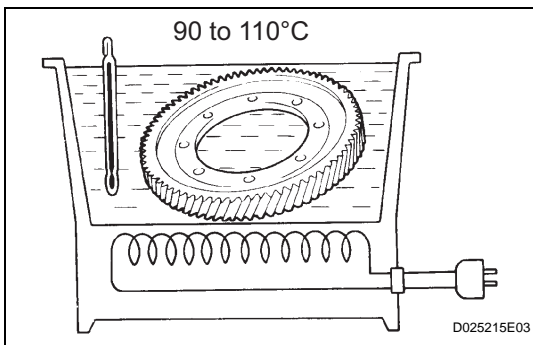


## 6. INSTALL FRONT DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

- (a) Using SST and a press, press in the front differential case tapered roller bearing front inner race to the differential case.  
**SST 09608-06041**

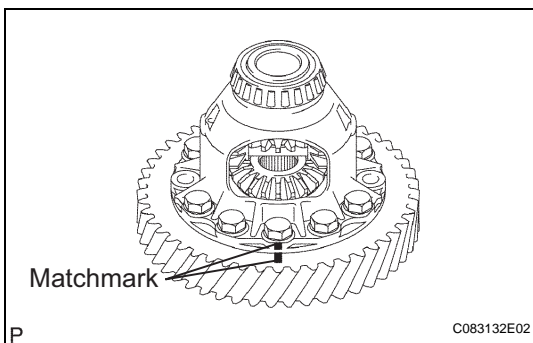


- (b) Using SST and a hammer, tap in the front differential case tapered roller bearing front outer race to the transaxle housing.  
**SST 09950-60020 (09951-00680), 09950-70010 (09951-07100), 09950-60010 (09951-00340)**



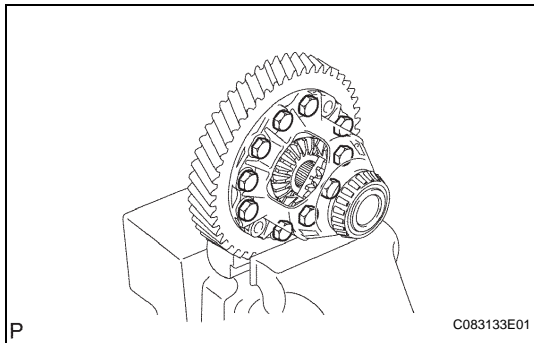
## 7. INSTALL FRONT DIFFERENTIAL RING GEAR

- (a) Using ATF and heater, heat the front differential ring gear to 90 to 110°C (194.0 to 230.0°F).  
 (b) Clean the contact surface of the front differential case.

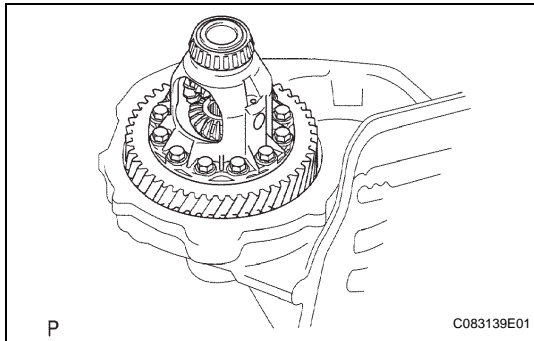


- (c) Align the matchmarks, and install the front differential ring gear case quickly.

AX

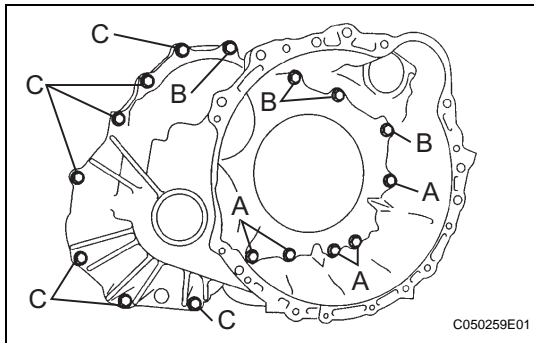


(d) Tighten the 10 bolts.

**Torque: 95 N\*m (969 kgf\*cm, 70 ft.\*lbf)****8. INSPECT TAPERED ROLLER BEARING PRELOAD**

(a) Install the differential assembly to the transaxle case.

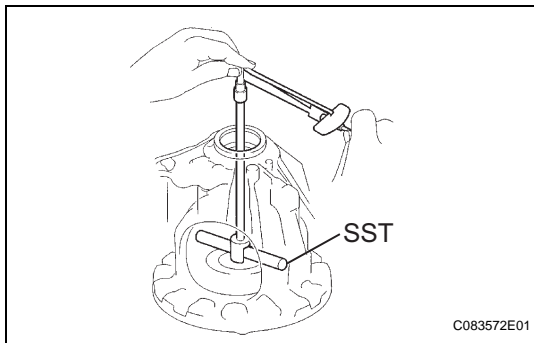
(b) Install the transaxle housing to the transaxle case.



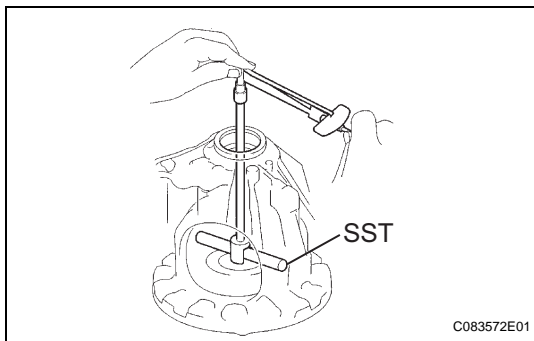
(c) Install the 16 bolts.

**Torque: 22 N\*m (224 kgf\*cm, 16 ft.\*lbf) for bolt A  
29 N\*m (296 kgf\*cm, 21 ft.\*lbf) for bolt B and C****HINT:**

Each bolt length is indicated below.

**Bolt length:****50 mm (1.97 in.) for bolt A and B****42 mm (1.65 in.) for bolt C**

(d) Using SST, turn the differential.

**SST 09564-32011**

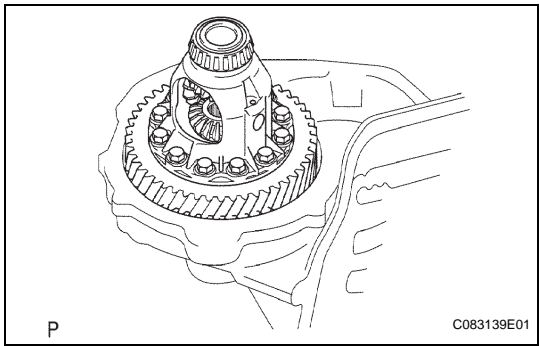
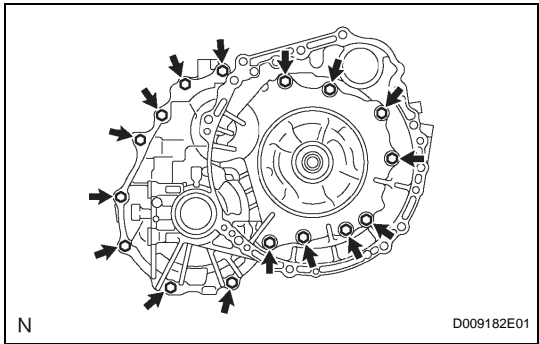
(e) Using SST and torque wrench, measure the preload of the differential.

**SST 09564-32011****Torque: Standard turning torque at 60 rpm****0.20 to 0.69 N\*m (2.0 to 7.0 kgf\*cm, 1.8 to 6.1 in.\*lbf) for new****0.10 to 0.35 N\*m (1.0 to 3.6 kgf\*cm, 0.9 to 3.1 in.\*lbf) for used**

Standard adjusting shim thickness

Mark	Thickness
0	1.90 mm (0.074 in.)
1	1.95 mm (0.077 in.)
2	2.00 mm (0.079 in.)
3	2.05 mm (0.081 in.)
4	2.10 mm (0.083 in.)
5	2.15 mm (0.085 in.)
6	2.20 mm (0.087 in.)
7	2.25 mm (0.089 in.)
8	2.30 mm (0.091 in.)
9	2.35 mm (0.093 in.)
A	2.40 mm (0.094 in.)
B	2.45 mm (0.096 in.)
C	2.50 mm (0.098 in.)
D	2.55 mm (0.100 in.)
E	2.60 mm (0.102 in.)
F	2.65 mm (0.104 in.)
G	2.70 mm (0.106 in.)
H	2.75 mm (0.108 in.)
J	2.80 mm (0.110 in.)

AX

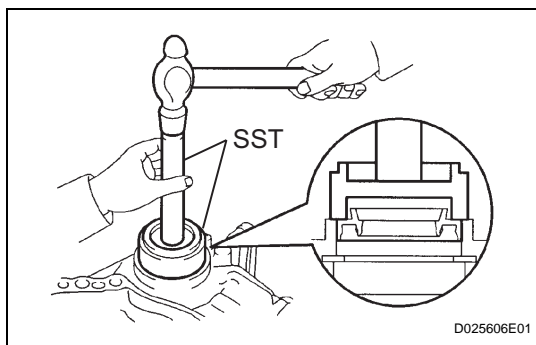


- (f) Remove the 16 bolts.
- (g) Using a practice-faced hammer, remove the transaxle housing.

- (h) Remove the differential.

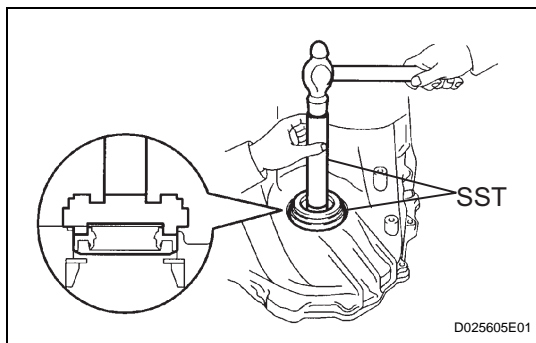


AX

**9. INSTALL TRANSAXLE HOUSING OIL SEAL**

- (a) Coat the lip of a new oil seal with a little amount of MP grease.
- (b) Using SST and a hammer, tap in the oil seal.

**SST 09350-32014 (09351-32150), 09950-70010 (09951-07150)**

**10. INSTALL DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL**

- (a) Coat the lip of a new oil seal with a little amount of MP grease.
- (b) Using SST and a hammer, tap in the oil seal.

**SST 09350-32014 (09351-32150), 09950-70010 (09951-07150)**